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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,458	10/01/2003	Yosuke Tamura	243395US6	5492

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EXAMINER

SYED, FARHAN M

ART UNIT PAPER NUMBER

2165

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/674,458

Applicant(s)

TAMURA, YOSUKE

Examiner

Farhan M. Syed

Art Unit

2165

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-31 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
- 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
- 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-31 are pending.

Election/Restrictions

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-6 are drawn to a data processing system comprising of a plurality of chain managers for performing control of a data input and/or data output service.
 - II. Claims 7-9, 21-23, and 29 are drawn to an information processing apparatus serving as a chain manager arranged to correspond to each of a plurality of chain objects where memory means for storing an ID set on the chain object.
 - III. Claims 10, 11, 24, 25, and 30 are drawn to an information processing apparatus serving as a root chain manager for performing control of data processing service involving a plurality of chain objects, where control means for performing an ID acquisition process for the chain objects.
 - IV. Claim 12 is drawn to an information processing apparatus serving as a chain directory for performing an information providing process to a data processing services involving a plurality of chain objects, where a database for storing service information is executed by chain objects.
 - V. Claim 16 is drawn to a data processing method for service chain including a plurality of chain objects where each chain object is given a unique ID.

3. Inventions in Groups I-V are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects. In the instant case the different inventions are: (1) a data processing system comprising a plurality of chain managers for performing control of a data input and/or data output service, (2) an information processing apparatus serving as a chain manager so as to correspond to a number of chain objects in memory, where memory means for storing an ID set on the chain objects, (3) a root chain manager for performing control of data processing service involving a number of chain objects, (4) a chain directory for performing an information providing process, where a database for storing service information is executed by each chain object, and (5) a service chain including a number of chain objects that are given a unique ID.

Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art, restriction for examination purposes as indicated are proper.

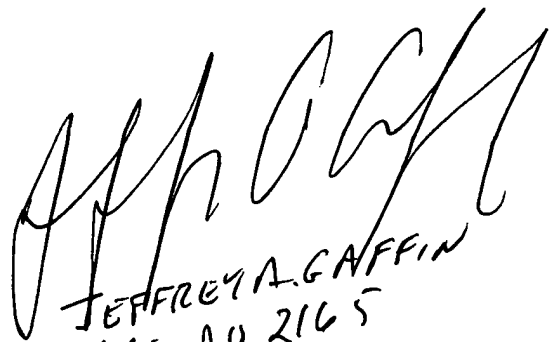
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farhan M. Syed whose telephone number is 571-272-7191. The examiner can normally be reached on 8:30AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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JEFFREY A. GAFFIN
SPE, AU 2165

1. A data processing system comprising:

- a plurality of chain managers for performing control of a data input and/or data output service, the data input and the data output service handling data associating with one or more chain objects and having a predefined file format and/or data type;
- a chain directory for storing correspondence data and performing an executable service retrieval process, the correspondence data storing correspondence relations among identifiers (ID) set on the chain managers,
- identifiers (ID) of chain objects associating with the chain ~~managers~~, data input and/or data output services associated with the chain objects, and file formats and/or data types that can be used in the data input and/or data output services, the executable service retrieval process being performed by matching of the file formats and/or data types and matching of the data input and the data output services; and
- a root chain manager for acquiring one chain object ID and performing a query process to the chain directory, the query process inquiring a chain object that uses the data output or data input service having the same file format and/or data type as that of the data input or data output service associating with the chain object with the acquired ID;
- wherein the chain manager ID and the chain object ID are identifiers that are defined in address spaces different from each other.

7. An information processing apparatus serving as a chain manager arranged so as to correspond to each of a plurality of chain objects, the chain object being arranged within a service chain that is included in a data processing system, the information processing apparatus comprising:

- memory means for storing an ID set on the chain object, and service profile information as executable service information; and
- control means for performing a data storage process for a received chain token and a program triggering process based on the received chain token, based on the service profile information in response to the chain token received from a root chain manager arranged within the service chain.

10. An information processing apparatus serving as a root chain manager for performing control of data processing service involving a plurality of chain objects, the chain objects being arranged in a service chain that is included in a data processing system, the information processing apparatus comprising:

- control means for performing an ID acquisition process for the chain objects;
- generating a service query packet for inquiring an executable data processing service to which the chain object with the acquired ID is applied;
- transmitting the service query packet to a chain directory that has service information; and
- circulating a chain token among chain managers arranged so as to correspond to chain objects participating in the service based on a reply to the query packet;
- thereby performing control of service execution.

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12. An information processing apparatus serving as a chain directory for performing an information providing process as to a data processing service involving a plurality of chain objects arranged in a service chain that is included in a data processing system, the information processing apparatus comprising:

- a database for storing service information executable by each chain object in association with an ID of the chain object; and
- control means for performing a retrieval process on the database that stores the service information in response to a service query packet storing a plurality of chain object IDs based on the IDs, and generating a service query reply packet that stores executable service information acquired as a result of the retrieval process.

16. A data processing method for a service chain including a plurality of chain objects, the each chain object being given a unique ID, the data processing method comprising:

- an ID acquiring step for acquiring an ID of the chain object;
- a query execution step for transmitting a service query packet storing the ID acquired by the ID acquiring step to a chain directory that has service information;
- a query reply step for searching service information corresponding to the chain object ID stored in the service query packet based on the chain object IDs in the service query packet, performing a retrieval process to search an executable service involving chain objects by performing a matching process for searching a combination of the same data formats allowing a data input and a data output, generating a service query reply packet storing service information as the search result, and replying to a sender of the query; and a control step for performing control of service execution by circulating a chain token among chain managers corresponding to the chain objects participating in the service based on the information stored in the service query reply packet.

21. A data processing method performed by a chain manager arranged so as to correspond to each of a plurality of chain objects that are included in a service chain, the chain object being given a unique ID, the data processing method comprising:

- a memory step for storing an ID set on the chain object and service profile information as executable service information; and
- a control step for performing a data storage process to a received chain token based on the service profile information in response to the chain token received from the root chain manager, and a program triggering process based on the received chain token.

24. A data processing control method for a data processing service involving a plurality of chain objects that are included in a service chain, each chain object being given a unique ID, the data processing control method comprising:

- a step for performing an ID acquisition process for the chain object;
- a step for generating a service query packet regarding an executable data processing service involving a chain object having the acquired ID, and transmitting it to a chain directory that has service information; and

- a control step for performing control of the service execution by circulating a chain token among chain managers arranged so as to correspond to the chain objects participating in the service based on a reply to the service query packet.

26. An information provision processing method for a data processing service involving a plurality of chain objects arranged in a service chain that is included in a data processing system, the information provision processing method comprising:

- a step for receiving a service query packet storing a plurality of chain object IDs;
- a search step for performing a retrieval process in a database based on the IDs stored in the service query packet, wherein the database stores service information executable by each chain object in association with the chain object IDs;
- a step for generating a service query reply packet storing executable service information acquired as a result of the retrieval process; and
- a step for transmitting the service query reply packet.

29. A computer program for performing a data process performed by a chain manager arranged so as to correspond to each of a plurality of chain objects that are included in a service chain, the chain object being given a unique ID, the computer program comprising:

- a memory step for storing an ID set on the chain object and service profile information as executable service information; and
- a control step for performing a data storage process to a received chain token based on the service profile information in response to the chain token received from the root chain manager, and a program triggering process based on a received chain token.

30. A computer program for performing a data processing control process for a data processing service involving a plurality of chain objects that are included in a service chain, each chain object being given a unique ID, the computer program comprising:

- a step for performing an ID acquisition process for the chain object;
- a step for generating a service query packet regarding an executable data processing service involving a chain object having the acquired ID, and transmitting it to a chain directory that has service information; and
- a control step for performing control of the service execution by circulating a chain token among chain managers arranged so as to correspond to the chain objects participating in the service based on a reply to the service query packet.

31. A computer program for performing an information providing process for a data processing service involving a plurality of chain objects arranged in a service chain that is included in a data processing system, the computer program comprising:

- a step for receiving a service query packet storing a plurality of chain object IDs;
- a step for searching service information corresponding to a chain object ID stored in the service query packet based on the chain object IDs in the service query packet, performing a retrieval process to search an executable service involving chain objects by performing a matching process for searching a combination of

the same data formats allowing a data input and a data output, and generating a service query reply packet storing the service information as the search result; and

- a step for transmitting the service query reply packet.